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HORTICULTURE



Take a Mid-Winter Nature Break With the Great Backyard Bird Count February 12-15, 2010

New York, NY and Ithaca, NY—Bird watchers coast to coast are invited to take part in the 13th annual [Great Backyard Bird Count](#), Friday, February 12, through Monday, February 15, 2010. Participants in the free event will join tens of thousands of volunteers of all levels of birding experience to count birds in their own backyards, local parks or wildlife refuges.

Each checklist submitted by these "citizen scientists" helps researchers at the [Cornell Lab of Ornithology](#) and the [National Audubon Society](#) learn more about how the birds are doing— and how to protect them. Last year, participants turned in more than 93,600 checklists online, creating the continent's largest instantaneous snapshot of bird populations ever recorded.



Taking part in the Great Backyard Bird Count is a great way to get outside with family and friends, have fun, and help birds—all at the same time. Anyone who can identify even a few species can provide important information that

enables scientists to learn more about how the environment is changing and how that affects our conservation priorities," said Audubon Education Vice President, Judy Braus. "Everyone who participates in the GBBC—families, teachers, and young people—will get a chance to hone their observation skills, learn more about birds, and make a great contribution to the future!"

Anyone can take part in the Great Backyard Bird Count, from novice bird watchers to experts. Participants count birds for as little as 15 minutes (or as long as they wish) on one or more days of the event and report their sight-

Frankfort Climate Action Network

32 Frankfort area households cut carbon emissions by more than 260 tons in grassroots project. To address climate change, nine Frankfort and Franklin County organizations partnered this fall on a household greenhouse gas reduction project called "Lighten Up, Frankfort!" The organizations and participants celebrated their accomplishments to date at the Kentucky Coffeetree Café in downtown Frankfort in December.



www.frankfortclimateaction.net

Sixty-one households joined the effort this fall and 32 of them had reported their carbon reduction action plans to the Frankfort Climate Action Network (FrankfortCAN) coordinators in time for the celebration. The 32 reporting households made cuts in their annual greenhouse gas emissions totaling 317,700 pounds and pledged to make further cuts of 209,600 pounds within a year of completing their plans. Actions completed and pledged amount to more 263.6 tons of greenhouse gas pollution that will not go to into the atmosphere in the coming year as a result of the changes made by the Lighten Up participants. When all of the participants finish their meetings and turn in their results, FrankfortCAN organizers are confident that the totals will exceed 300 tons.

Lighten Up, Frankfort! is organized by FrankfortCAN, an all-volunteer group in the community. Members or employees of the participating organizations formed teams of three to ten households that met four times and committed to actions that reduced each household's greenhouse gas emissions by anywhere from 2,000 to 80,000 pounds per year. The teams used a workbook called

“The Low Carbon Diet,” and the quantities used to project households cuts are based on estimates provided in the book.

In addition to FrankfortCAN, Lighten Up teams were formed at First Christian Church, Frankfort Chapter of the United Nations Association, Franklin County Cooperative Extension, Frankfort Electric & Water Plant Board, Kentucky State University, South Frankfort Neighborhood Association, South Frankfort Presbyterian Church Frankfort and the Unitarian Universalist Community of Frankfort.

“We’re heartened by the success of the pilot program this fall, and we applaud the organizations that stepped up to lead the community in this effort,” said Lighten Up Coordinator Tona Barkley. “We set a goal of cutting 100 tons of CO₂ through the fall pilot, and we more than doubled that. Now that we’re rolling, we expect participation to take off in 2010. In fact, we know six teams are forming for next year, and we are actively recruiting organizations and team leaders to join the effort.”

“The workbook provided advice and simple actions to take to help reduce CO₂ emissions,” commented Sharmista Dutta, a water engineer at the Frankfort Electric & Water Plant Board who was on the Plant Board’s Lighten Up Team. “Both the workbook and the meetings helped show just how easy it is to cut emissions. Discussing the actions taken with other team members and realizing that others are doing the same actions helps create a sense of ‘making a difference.’”

Actions participants chose to reduce their carbon emissions ranged from installing low-flow shower heads, increasing recycling, reducing the number of clothes-dryer loads each week, and installing compact fluorescent light bulbs to planting trees, purchasing Energy Star appliances, sealing air leaks in the home, and eating vegetarian meals one or more days each week.

“The ‘Low Carbon Diet’ book and web site give a systematic way to determine your carbon footprint and show ways that are easy and practical to reduce the footprint,” said Dick Watkins, a retired Lexmark engineering manager who was on the team Frankfort Chapter of the United Nations Association USA Team. “Working in a group . . . yields new ideas and accountability.” Watkins added, “It stuns me that German families have a carbon footprint one-half of ours, and the

Swedes have one-fourth of ours.”

“The kids in our group [with their parents] were excited about participating,” said Fonda McWilliams, team leader of the First Christian Church team. “Children really care about this issue and have a vague sense of what ‘they are supposed to do,’ but they don’t really know how to put it into practice in their own lives. This program gives them specifics that empower kids to make real changes *themselves*.”



A recent study for the city of Frankfort showed that household operations produce 56% of the greenhouse gas emissions in the city. According to the study, 13.8 tons of CO₂ and other greenhouse gases per resident are released into the atmosphere each year.

Americans make up 5% of world population but generate 25% of world greenhouse gas emissions. With CO₂ in the atmosphere currently above the level that scientists consider safe, scientists believe emissions must begin to decrease immediately if the world is going to avoid the catastrophic consequences of unchecked climate change.

“This fall pilot is only a beginning,” said FrankfortCAN organizer Connie Lemley. “With something on the order of 18,000 households in the city and county, just imagine how many tons of greenhouse gas emission we could cut if hundreds or thousands of people join Lighten Up teams!”

If you would like to participate in the Lighten Up! Program and be on an Extension Team, contact the Extension office or contact FrankfortCAN on the organization’s web site at www.frankfortclimateaction.net.

Great Backyard Bird Count (continued from Page 1)

ings online at www.birdcount.org. One 2009 participant said, “Thank you for the opportunity to participate in citizen science. I have had my eyes opened to a whole new interest and I love it!”



“The GBBC is a perfect first step toward the sort of intensive monitoring needed to discover how birds are responding to environmental change,” said Janis Dickinson, director of Citizen Science at the Cornell Lab. “Winter is such a vulnerable



period for birds, so winter bird distributions are likely to be very sensitive to change. There is only one way—citizen science—to gather data on private lands where people live and doing this across the continent over many years. GBBC has enormous potential both as an early warning system and in capturing and engaging people in more intensive sampling of birds across the landscape.”

Bird populations are always shifting and changing. For example, 2009 GBBC data highlighted a huge southern invasion of Pine Siskins across much of the eastern United States. Participants counted 279,469 Pine Siskins on 18,528 checklists, as compared to the previous high of 38,977 birds on 4,069 checklists in 2005. Failure of seed crops farther north caused the siskins to move south to find their favorite food.

On the www.birdcount.org website, participants can explore real-time maps and charts that show what others are reporting during the count. The site has tips to help identify birds and special materials for educators. Participants may also enter the GBBC photo contest by uploading images taken during the count. Many images will be featured in the GBBC website's [photo gallery](#). All participants are entered in a drawing for prizes that include bird feeders, binoculars, books, CDs, and many other great birding products.

For more information about the GBBC, visit the website at www.birdcount.org. Or contact the Cornell Lab of Ornithology at (800) 843-2473 or (outside the U.S., call (607) 254-2473) or gbbc@cornell.edu, or Audubon at citizenscience@audubon.org or (215) 355-9588, Ext 16.

The Great Backyard Bird Count is made possible, in part, by generous support from [Wild Birds Unlimited](#).

Images by 2009 GBBC participants: Black-capped Chickadee by Rodney Smith, WA; Bird watcher at window by Terie Rawn, NY; Pine Siskins by Steve Gillespie, WV.

Audubon is dedicated to protecting birds and other wildlife and the habitat that supports them. Our national network of community-based nature centers and chapters, scientific and educational programs, and advocacy on behalf of areas sustaining important bird populations, engage millions of people of all ages and backgrounds in conservation. www.audubon.org

The Cornell Lab of Ornithology is a nonprofit membership institution interpreting and conserving the earth's biological diversity through research, education, and citizen science focused on birds. Visit the Cornell Lab's website at www.birds.cornell.edu

Home Hort Hints

Rick Durham, Consumer Horticulture Extension Specialist, University of Kentucky

Storing vegetable seeds.

If you are an avid gardener then you know that seed catalogues will soon be showing up in the mail box. But if you are like most people, you will have many seeds left over from the previous season. Are these seeds still viable? Is there a good chance they will germinate if planted? You bet. Most vegetable seeds remain viable or able to germinate for three years or more when stored properly. A few vegetables such as spinach, onion, and sweet corn, produce seeds that remain viable for a shorter period of time. In any case, storage conditions are very important. It's best to keep seeds as dry as possible. Enclosing them in a glass jar or other airtight container may be helpful. This will also protect against insect infestation and feeding by rodents. Although refrigeration is not necessary, keeping seeds as cool as possible, but not freezing, will also prolong their life. It's easy to check the germination ability of stored seeds and this might even be a fun family project. Simply remove a set of 20-30 seeds from each stored packet, wrap them in moist paper towels, place them in a zip-lock bag, and keep them in a warm place (70-80F). They should germinate in a week to 10 days. If half or more of the seeds germinated, it should be fine to sow them in the garden. Just increase the planting density accordingly to account for less than 100% germination. If germination is low, discard the seed lot and order or buy fresh seeds.

Woody plant care for the winter.

During periods of warm weather, continue to water newly planted trees and shrubs as well as established evergreens. This is especially true for plants on the south and west side of the house since they receive more winter sun than the rest of the landscape. This brings up another situation. If you are making plans now to transplant trees or shrubs in early spring, consider that the light situations in your landscape may differ between summer and winter. Areas that seem bright and sunny now may not be during the summer.

Remember your evergreens during snow storms. Accumulating snow, especially when wet, may seriously damage branches. A broom can be used to sweep off snow on lower branches. An upward sweeping motion is best, and be sure to watch out for power lines. It's better to prop up ice laden branches than to try to physically remove the ice. Such branches tend to be brittle in cold weather and may be damaged in the removal process. In other words, don't beat the ice off of branches with a stick! If severe winter damage occurs to limbs and

Home Hort Hints (continued on Page 5)

EVERGREEN TREE PRINT SHOPPING TOTES



Supplies:

Plain canvas tote style bags, use Eco-Friendly cotton/hemp if you can find them!

Acrylic fabric paint

(Materials available at most craft stores)

Turn the bag upside down, so the handles are closest to you. Lightly trace a triangle (think Christmas Tree) shape or other shape onto the tote.

Paint your hand with the green fabric paint. Carefully place your hand onto the top of the triangle on the bag, with your fingers pointing down toward the bottom of the bag.

For an evergreen tree shape, the tree needs 15 hand prints. There will be five prints on the first row, four on the next row, then three, then two then one at the top. Let the handprints overlap. Remember the bags are upside down so the fingers of the handprint are pointing toward the bottom of the bag, like the tree branches.

Then you can use stickers to decorate the tree or, or use your fingerprints dipped in red or purple to make the ornaments on the 'tree'. Also you can use white paint or glittery paint to add "snow" to the branches.

Use your tote when you shop and particularly when you visit the Farmer's Market!

This handprint tree can also be done on aprons, t-shirts, or paper! For paper use watercolor paints. Enjoy! Be sure to send pictures of you and your craft to the Extension Office!

<http://www.ces.purdue.edu/vanderburgh/horticulture/weird.htm> Perdue Extension's Weir World of Weeds and Other Hilarious Horticultural Hijinks!

<http://tonto.eia.doe.gov/kids/>

Energy Kids, a website sponsored by the Energy Information Administration, provides information, tips, games, and activities for youth. In addition, information including lesson plans, field trips, and links are available for educators.

www.wecanky.com/ We Can Kentucky!

We Can! stands for Ways to Enhance Children's Activity's and Nutrition. We Can! is a national program created by the National Institutes of Health. The program is designed to help youth ages 8-13 maintain a healthy weight. The website provides information on eating better, moving more, reducing screen time, and more.

<http://www.ca.uky.edu/gogreen/> This site provides information for Kentuckians, from UK Extension, regarding environmental "green" topics.

<http://urbanext.illinois.edu/fruit/tree.cfm?section=tree> University of Illinois Tree Fruit for Homeowners website




branches, pruning can be done at any time to remove the damaged parts. Otherwise, wait until severe winter weather is over before doing maintenance pruning. In this way one can better judge and remove other branches that may have been damaged during winter.

Other gardening activities for winter.

Clean and sterilize tools, pots, and other items you use around plants. You can use a 10% solution of household bleach (1 part bleach to 9 parts water) or rubbing alcohol (straight from the bottle) for this purpose. Soak or allow the bleach to stay on the item for about 15 minutes, then rinse with water and let dry. The alcohol will evaporate quickly so rinsing is unnecessary. If salt deposits have accumulated on clay pots, soak them for a few hours in a solution of 1 cup household vinegar and 1 cup household bleach added to 1 gallon of warm water. Some scrubbing with iron wool may be required to remove heavier deposits.

If you have decorative pottery in the landscape, move it to the garage or basement to prevent damage during cold weather. If containers are too large to move, cover them with plastic or turn them upside down to prevent water from collecting and freezing during the winter. Check out your garden sprayer to see if rubber/leather washers or the plunger needs to be replaced. It may take some time to locate replacement parts. By doing this in winter your sprayer will be ready when you need it.

Make festive arrangements from evergreen foliage, dormant branches with various textures, and seed pods. When kept watered, such arrangements will last for several weeks indoors. 

STARTING PLANTS FROM SEED AT HOME

by J. W. Buxton, R. G. Anderson, M. L. Witt, and S. Bale; UK Extension Horticulture

Germinating and growing vegetable and flower seeds until they are ready to be planted in the garden can save you money and give great satisfaction. Home germination of flower and vegetable seed may be necessary if you plan to plant a fall garden or in order to produce your favorite varieties of vegetables during the year or if you have an older or different variety of plant than can be found in a garden center greenhouse.

A variety of systems can be used for starting transplants. These systems should provide an ideal environment for both seed germination and plant growth. They should also be dependable when seeding a variety of plants and give consistent results.

Steps in Seed Germination

1. Seed Selection and Storage.

It is best to start with new seed, so order only one year's supply. While some seed may be stored for several years with slight deterioration in quality, other seed may be viable for only one year.

2. Selection of Germination Medium.

The germination medium should be well drained, relatively low in fertilizer, and sterile (free of insects and diseases). The medium can be prepared from a combination of peat, vermiculite, or similar ingredients. However, since relatively little medium is needed for seed germination, it may be best to consider purchasing a commercially packaged growing medium from a garden supply store or greenhouse operator. Commercially packaged growing media consist of a mixture of two or more of the following materials: sphagnum moss peat, bark, perlite, vermiculite, coarse sand, processed bark, or expanded shale. These media are convenient and suitable for most plants directly from the bag. They are free from

Welcome back to the Hort Hotline, the Franklin County Extension Office Horticulture Newsletter. We've been busy training and graduating a new Master Gardener Class of 2009. Don't forget to take care of any new additions to your plant collection from the holidays. I've included some articles that will be helpful for those of you starting your gardens indoors this year. If you have any questions, please give me a call or email me at kim.cowherd@uky.edu. Happy New Gardening Year!



Kim Cowherd
CES Agent for Horticulture



Calendar of Things To Do!



There are so many places to go and things to do in the spring and summer!
Choose just one this month and get outdoors with your family and friends!



January 10-14
National Invasive Species Awareness Week
www.nisaw.org/

February 10-13
National Farm Machinery Show
KY Expo Center, Louisville, KY
www.farmmachineryshow.org/

UK Arboretum Events: Log on to http://www.ca.uky.edu/arboretum/cal_events.php
or call (859) 257-6955

Salato Events: Log on to <http://fw.ky.gov/pdf/springcoe09.pdf> or call (502) 564-7863

Ky State Nature Preserves Events: Log on to <http://www.naturepreserves.ky.gov/events/>
or call Kentucky State Nature Preserves Commission 502-573-2886

Bernheim Forest Events: <http://www.bernheim.org/programs.htm> or call 502-955-8512

FATS, OILS, AND GREASES

Fats, Oils, and Greases, commonly referred to as FOG, are produced when cooking. Typical items that result in FOG are meat fats, sauces/dressings, cooking oil, shortening, butter, margarine, frying oil, food scraps, baked goods, lard, and dairy products. Pouring fats, oils, and greases down the kitchen drain can be costly! When poured down the drain, fats, oils, and greases stick to the inside of pipes. Overtime, they build up and cause pipes to clog, such as in the picture to the right (photo courtesy of Bluegrass PRIDE). Clogged pipes can result in septic system failure and untreated wastewater backing up in homes and businesses.



Cleanup and repair can be expensive. Homeowners can properly dispose of fats, oils, and greases by storing them in a sealed container (such as an old coffee can) and throwing the container into the trash when it becomes full. In addition, homeowners should wipe skillet, pots and pans, and other dishes with a dry paper towel before washing. Then the paper towel should be thrown away in the garbage. Using a cloth towel to wipe greasy or oily dishes clean defeats the purpose. When you wash the cloth towel, the grease and oil from the dishes still washes down the drain and makes its way to pipes and sewer systems. For more information on FOGs, visit www.bgpride.org/FOGs.htm.

weeds, insects and diseases, and limestone and fertilizers have been added to support plants for 2-6 weeks. Most are suitable for germinating seeds as well as growing transplants.

3. Selection of Containers.

The container used for seed germination should have certain characteristics. It should be 2-3 inches deep and sterile and it should have holes in the bottom for drainage as well as for water uptake. A single container may be used for many types of plants. However, it would be best to germinate only one cultivar of a certain plant in a small container so that the environment for each may be more accurately controlled.

4. Sowing Seed.

The germination medium should be damp before it is placed in the container. Fill the container to within about 1/2 inch of the rim. Seed should be scattered uniformly across the surface or sown in rows at the rate of 10-20 seeds per square inch. Seeds sown too thickly will result in excessive competition among plants and spindly growth. Small seeds should be left uncovered. Cover larger seeds with a thin layer of germination medium. Most seeds will germinate in either darkness or light. Special needs regarding light and dark treatments should be stated on the seed packet.

5. Temperature Requirements for Germination.

Most seeds will germinate very well when grown within a 70-80 F range. Again, specific temperature needs of seeds will be indicated on the seed packet. If the temperature is maintained below or above the recommended range, the germination rate will be slower and fewer seeds will germinate. Most homes are kept at temperatures somewhat below the recommended range but there may be some areas in the home that are suitable.

6. Moisture and Humidity Requirements for Seed Germination.

Maintenance of a constant moisture level and nearly 100 percent relative humidity is important to successful seed germination. Several methods may be used.

- a. Hand Watering. Adequate moisture can be maintained by hand watering. However, great fluctuations in water content of the medium may occur between irrigation as it is easy to forget to water. Hand watering with cold water also reduces germination temperature.
- b. Plastic Covering. Plastic is an excellent way to maintain high humidity and moisture levels. After seed is sown, a piece of clear plastic, placed over the top of the container, will maintain a high humidity

level. The container may also be placed inside a plastic bag and sealed to prevent moisture loss. To avoid any problems, the container should not be placed in direct sun because plastic will trap heat and damage the seeds. Secondly, the plastic needs to be removed immediately after emergence of seedlings to prevent leggy growth.

7. Maintenance of Sterile Conditions During Seed Germination.

Fungi and/or bacteria may kill seedlings during germination. Thus the medium, container, tools and even the seed itself should be sterile. Containers and tools can be sterilized by soaking them in a 10% household bleach solution (1 1/2 tablespoon/cup of water) for 5 minutes. The following suggestions should help prevent disease problems:


1. Use seed treated with fungicide. Seed packets are usually clearly marked when seeds have been treated with fungicides. Seeds are generally brightly colored (pink, purple, green). Pot plant seeds deeper than necessary.
2. Keep temperature constant.
3. Provide seedlings with adequate ventilation. Avoid overwatering.

Growing Plants After Germination

After germination, plants need a maximum of light for optimum growth. Seedlings should be transplanted to larger containers within a few weeks after germination. One application of a complete fertilizer should be given to seedlings while they are still in germination containers. After transplanting, plants should be fertilized once a week with a complete fertilizer. The ideal temperature for growth of transplants should be 60-75 F during the time plants receive light and about 50-65 F during darkness (see Table 1). Excessive night temperatures (too cool or too warm) will result in poor quality growth. The growing medium should be kept damp.

Timely Seedling Production

Plan the seed sowing date carefully so your transplants are ready to go into your garden on time. The length of time from sowing seed until plants are ready to be transplanted depends upon the cultivar and the environment available for growing.

For more information log on to <http://www.ca.uky.edu/agc/pubs/ho/ho56/ho56.htm> or call the Extension Office and request publication **HO-56 STARTING PLANTS FROM SEED AT HOME.** 

Is buying local food “greener”?

*Bob Perry, Project Manager
Sustainable Agriculture & Food Systems Working
Group, UK College of Agriculture*

Some recent studies have concluded that the economy of scale in transportation makes food from distant locations greener than local food. Compare one semi loaded with tomatoes or lettuce or anything from California or Florida going to your local grocery or big box store with 20 trucks coming from local farms to your farmers market. Crunching the numbers can tell you that per item, the semi will have a lower carbon footprint than all the farmers' trucks. However, my statistics professor in graduate school admonished us that “you can torture numbers until they will confess to anything” and “not to try and get a confession to suit our own agenda”. One thing this example does not take into account is taste! There is no comparison between a tomato bred for shipping and color to one grown locally for taste. It also does not take into account the effects that buying locally has on the local economy and community.

So what about this 100 mile diet idea, or Barbara Kingsolver's “Animal, Vegetable, Miracle” experiment? Can you or should you eat 100% local, however you choose to define it? Eating locally or being a “locavore” is not about being a purist, but buying what you can find locally and what you can afford that supports your local economy and community. For example, I like coffee, a lot, and I'm not willing to give it up. I do however buy Fair Trade coffee that is roasted locally by a locally owned business. It is more expensive than grocery store coffee but it is a little perk I allow myself to spend extra on.

Money spent locally stays in the community longer; some economists suggest it turns over as much 6 times before leaving the community. Money spent at non-local businesses leaves the community almost immediately, and what little it leaves behind is usually in the form of low wages and low if any taxes. Not only does buying local support the local farmer but also

the local farm supply stores and processors when you buy local meats.

Think about shopping at big box stores or large groceries. How many new friends have you made there? Your object is to get in and out as fast as possible. At a farmers market or a farm stand, you can talk to the folks that grew whatever you are buying and probably talk to your neighbors as well, and possibly meet someone new in your community. How many times does that happen at a big box store?

Of all the things you try and buy at the lowest possible cost, should food really be one of them? Food is life, nourishment; it should not only be enjoyable but also foster family well being. What is better than a family sitting around the dinner table, we are all so busy, kids included, it is one of the few chances we get to sit together and talk.

Perhaps the greenest of all local food is the food grown in your own backyard, but there are still those who would argue that it is greener and cheaper to buy it rather than grow it when you add up all the costs. What they don't account for in this argument is the exercise and enjoyment you get from gardening, the satisfaction that comes from honest work and how the good food you grow tastes. 🌱



The Myth of Cloroxed Clippers

“A bleach solution is the best choice for disinfecting pruning wounds and tools”

Linda Chalker-Scott, Ph.D., Extension Horticulturist and Associate Professor, Washington State University

The Myth

Anyone who has made an investment in top-quality pruning tools probably cleans and maintains them on a regular basis. But would you clean them every day - maybe several times? If you are worried about potentially transmitting plant diseases such as fire blight, Dutch elm disease, and sudden oak death, then such a cleaning regimen would be crucial. Furthermore, you might be inspired to disinfect the pruning wounds, especially those made on diseased trees and shrubs. The question is – what to use as your disinfectant?

Nearly all of the popular web sites with advice regarding tool disinfection say something like this: “...sterilize pruning tools using a solution of 1½ cups of liquid chlorine bleach in 2 gallons of water. After each cut, dip the pruner or saw into this solution before starting the next cut.” This advice is repeated on thousands of web pages, including .edu sites. Is this the best choice?

The Reality

A few years ago I wrote a fact sheet on when to disinfect pruning tools (available at <http://www.puyallup.wsu.edu/~Linda%20Chalker-Scott/Fact%20sheets.html>). You may want to read that as well.

Before disinfection, tools should be free of dirt and debris so the disinfecting solution can reach every cutting surface. Increment borers should be treated in the same manner. Disinfectant solution can be carried in a tightly sealed plastic bottle; ideally this bottle should be wide enough so that tools can be dipped directly into it. If this is not feasible, solution can be applied with a clean cloth or poured over the tool held over a bucket. Disinfecting solutions should not be allowed to contaminate the soil.

Pruning tools that are regularly disinfected need to be kept in top condition. The older the blades, the more pitted they become; these pits can harbor microbes that are unaffected by quick sterilization. This is especially true of bacteria associated with active cankers; the sticky matrix is often difficult to remove from pruner surfaces. One study found that disinfectant solutions would not remove bacterial slime from the surface of cutting tools, especially if the tool surface was pitted.

I do not recommend the use of chlorine bleach for disinfectant use in the field for a variety of scientific and practical reasons:

1. Tool damage: As the MSDS (material safety data sheet) states for Clorox as well as other brands of bleach, “prolonged contact with metal may cause pitting or discoloration.” Indeed, this includes your

pruning tools. Bleach is an oxidizing agent, which means it is corrosive. You don’t find bleach for sale in unlined metal containers, and there’s a reason for that.

2. Clothing damage: It’s pretty self-evident that bleach will, well, bleach your clothing. Any spills in the field are impossible to treat unless you can immerse the affected material immediately. It probably is not a smart idea to carry a bottle of bleach in your pocket. Cloths used to wipe your tools down after treatment disintegrate quickly and have to be replaced continuously.
3. Human health damage: Chlorine bleach (like Clorox) is listed as an acute and chronic health hazard. In addition to the damage it can do to your clothing and tools, contact with bleach will irritate your skin and your nose, throat and lungs if vapors are inhaled. Medical conditions such as asthma, chronic bronchitis and obstructive lung disease are aggravated by exposure to chlorine bleach. Though you would most likely be in a well-ventilated area while using bleach, to minimize health risk you are also supposed to wear impervious gloves and safety glasses.
4. Plant health damage: Bleach is extremely phytotoxic, more so than any of the other commonly used disinfectants. Any bleach left on your pruning tools will damage the tissue of the next cut. Likewise, those pruners sold with reservoirs that release disinfectant as they cut should never be used.

Other disinfectant treatments have included: Alcohol dips (ethanol or isopropyl alcohol): Alcohols are readily available and moderately safe and effective to use. They can be expensive, however. Household cleaners (Listerine, Lysol, Pine-Sol): Readily available, moderately safe, can be extremely effective. Lysol (the original, phenol-based material) in particular was found to be least corrosive to pruning tools. This is my personal choice.

The Bottom Line

- Choose a disinfectant that is effective, readily available and affordable, relatively safe to handle, and won’t harm your tools or clothing. Many household cleaners fit this description.
- Be sure to clean tools of dirt, debris, etc. before disinfecting.
- After dipping your pruning tools, be sure to wipe away excess disinfectant to avoid injuring the next plant.
- A longer soaking may be needed for pruning surfaces that are not smooth.
- Like pruners, increment borers should always be sterilized before and after use.

For more information, please visit Dr. Chalker-Scott’s web page at <http://www.theinformedgardener.com>.

http://www.puyallup.wsu.edu/~Linda%20Chalker-Scott/Horticultural%20Myths_files/index.html 

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RETURN SERVICE REQUESTED

In the depths of winter I finally learned that within me there lay an invincible summer.
- Albert Camus

One kind word can warm three winter months.
- Japanese proverb

I like these cold, gray winter days. Days like these let you savor a bad mood.
- Bill Watterson

To read a poem in January is as lovely as to go for a walk in June.
- Jean-Paul Sartre

The gardening season officially begins on January 1st, and ends on December 31.
- Marie Huston

Contact the Franklin County Extension Office at (502) 695-9035 if you would like to receive our newsletter via email
or email requests to gil.thurman@uky.edu or kim.cowherd@uky.edu
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